RTTY Journal

APRIL 1981

VOLUME 29 NO. 4

75 CENTS

EXCLUSIVELY AMATEUR RADIOTELETYPE

SEE - MAILBAG-OUT OF THE BLUE - COLUMN FOR THE STORY ON THIS PICTURE

CONTENTS

RTTY MICROCOMPUTING

PREVENTING RFI

CONTEST RULES

CONTEST RESULTS

RTTY JOURNAL

Dee Crumpton,KA6NYW
Editor & Publisher
P.O. Box RY
Cardiff-by-the-Sea,
California 92007 U.S.A.

John P. Goheen,KA6NYK
Associate Editor

THE RTTY JOURNAL IS PUBLISHED 10 TIMES PER YEAR. MAY-JUNE & JULY-AUGUST ARE COMBINED.

Second Class permit
Encinitas, CA 92024

Business Offices
1155 Arden Drive
Encinitas, CA 92024

POSTMASTER SEND FORM 3579 to:
POB 179 Cardiff,CA 92007

BACK ISSUES

A duplicate of any back issue may be obtained from R. Wilson, 4011 Clearview Drive, Cedar Falls,IA 50613. $1.00 PPD. Reprints of all UART articles $2.00

SUBSCRIPTION RATES

USA	$ 5.00 per year
Canada surf.	$ 6.50 per year
Canada Air	$ 7.50 per year
Mexico surf.	$ 6.50 per year
Mexico Air	$ 7.50 per year
Foreign surf	$ 8.50 per year
Foreign Air	$12.00 per year

ALL ABOVE MUST BE IN U.S.A. FUNDS

SUBSCRIPTIONS AND ADVERTISING ARE CASH IN ADVANCE.

FOREIGN SUBSCRIPTION MANAGERS

THE FOLLOWING MANAGERS ARE DROP SHIPPED THE RTTY JOURNAL ON THE SAME DAY THE RTTY JOURNAL IS MAILED BY SURFACE AND AIR MAIL TO THE REST OF THE WORLD. IN SOME CASES AIL MAIL GETS TO OUR READERS FASTER THROUGH OUR MANAGERS, IN OTHER CASES IT DOES NOT. HOWEVER, IT IS NOT AS COSTLY TO GO THROUGH MANAGERS.

EUROPE

JEAN HURTAUD, F8XT
CHILLAC
16480 BROSSAC, FRANCE

AUSTRALIA

NORMAN WILSON, VK4NP
POB 81 ALBION, BRISBANE
QUEENSLAND, 4010 AUSTRALIA

ENGLAND

DR. ARTHUR GEE, G2UK
21 ROMANY ROAD, OULTON BROAD
LOWESTOFT, SUFFOLK
NR32 3PJ, ENGLAND

JAPAN

KANJI YAMAMURA, JH2FHX
2-42 UMENOKI, IZUMI-MACHI
TOKI CITY, GIFU-PREF
JAPAN MAIL NO.509-51

REPRODUCTION OF ANY PART OF THIS MAGAZINE, IN ANY FORM, IS STRICTLY ENCOURAGED, IF CREDIT TO THE AUTHOR AND THE RTTY JOURNAL IS GIVEN. THE PUBLISHER ASSUMES NO RESPONSIBILITY FOR ERRORS OR OMISSIONS, NOR IS ANY LIABILITY ASSUMED FOR DAMAGES RESULTING FROM USE OF INFORMATION IN ANY RTTY JOURNAL.

• RTTY-DX •

Skip Prinsen, WB6CYA-3611 Merrimac, San Diego, CA 92117.(714)276-3182

Greetings to all.....

In last months article, I mentioned that Irv Hoff, W6FFC has written software for the Heathkit computer. Irv has given me permission to give this software to anyone wanting it. He only asks that the user not change the names of the programs that he has put many hours into developing. I only ask that you send me an S.A.S.E. with your disk for the software that is available. An S.A.S.E. business letter size (#10) type will get you a listing of the programs that are available. Checking into the A/S frequency on 14.0825 will also get you the information on what is available.

Do not forget that the DX HONOR ROLL will be printed again in the July-August issue of the JOURNAL. See back issues for what is required. The deadline will be the first of June.

KØBJ is on the move again, this time going to UP1 land. Bruce will be operating RTTY on 14.090 from the 26 to the 30 of March. QSL in will be listed in the next issue if you cannot get the information from Bruce at the time of the contact.

ZL3AFH/A still has not gotten on the air as of this writing. He is active on SSB from Campbell Island at the present time.

I wish to thank the following Amateurs for their inputs again this month: KØPJ/6, WA6CQW, WØLHS, W3KV, KØBJ and K9MD.

Following is a listing of stations that have been reported active in the past few weeks: CE3CEW, CT1SV, CT1KB, DU1HEL, DU1JMG, DU1POL, EA8FO, EA9FJ, EC4VH, EI5Q, FP8HL, GD3YEO, GI4AHP, GM4BIT, GW4EVJ, HA5KJD, ISORUH, LU3EQ LX2LH, PA3ABE, SP3CMX, SP9BQJ, TI2WR, TR8WR, TU2JJ, T32AB, UK4FAO, UV3FD, UP2AW, YJ8TT, YV1AQE, Y39UO, ZL1BBR, 5T5JD, 5Z4TV, 8P6FX, 9H1FG, 9K2GR, and 9X5SP.

That's all folks

.....73's de Skip

AWARDS SECTION

-*-

DXCC #53 DATED 21 FEBRUARY 1981
W2PSU
KENNETH E. MABIE

-*-

-*-

DXCC # 54 DATED 25 FEBRUARY 1981
SM6AEN
LENNERT H. BJUREBLAD

-*-

K7BV, E.W. "Mac" McGinley has received DXCC sticker # "180".

0000000000000000000000000000000000000
0000000000000000000000000000000000000

KONTEST KORNER

GARTG	12 Apr 81	Apr 81
Alexander Volta	2-3 May 81	Apr 81
Eur-Afr Flash	23-24 May 81	Jan 81
Vk/Zl/Oceania	6-7 June 81	coming
GARTG	13 June 81	Apr 81
SARTG	15-16 Aug 81	coming
GARTG	30 Aug 81	Apr 81
WAEDC	14-15 Nov 81	Apr 81
GARTG	17 Oct 81	Apr 81
CARTG	Oct 1981	coming
Australia-Oceania and Asia		
Giant Flash	January 1982	coming
BARTG	March 1982	coming

0000000000000000000000000000000000000
0000000000000000000000000000000000000

CONTEST RULES

16th ALEXANDER VOLTA RTTY DX CONTEST

Saturday May 2nd 1200 GMT to Sunday May 3rd, 1981 1200 GMT.

BANDS- 3.5, 7, 14, 21 and 28 MHz Amateur bands.

CLASSES- Single operator, Multi-operator with single transmitter, SWL's. Names and call signs of all operators involved must be listed.

EXCHANGE POINTS- All two-way RTTY contacts between stations of the same Country are not valid. (count for zero exchange points, zero multiplier and zero QSO). All two-way RTTY contacts with stations in own zone will count two points. All others will count points in accordance with the exchange points table. The two-way RTTY contacts made on 3.5 or 28 MHz are worth double. Stations may not be worked more than once on any one band. Additional contacts may be made with the same station if a different band is used.

MULTIPLIERS- A multiplier of one is given for each country contacted. The same country may be claimed for extra multiplier if a different band is used. Extra multiplier for each intercontinental country worked at least in 4 bands.

SCORING- Total exchange points times the total number of multipliers times the total number of QSO's.

COUNTRY LIST- ARRL Country List. Each USA, Canadian and Australian District will be considered as a separate country.

MESSAGE- RST, QSO number and zone.

LOGS AND SCORE SHEETS- Use one log per band, and logs must be received by June 20,1981 to qualify (it is advisable to air mail). Logs to contain Band, Date, Time GMT, Call signs, exchanges sent and received, points and multipliers. Enclose a summary score sheet (comments always appreciated). Send to: G. Vulpetti,I2VTT, P.O. Box 37, I-22063 Cantu, Italy.

SWL's Use same rules for scoring, but based on stations and messages copied. Awards to the top stations in each class.

0000000000000000000000000000000000000

DAFG/GARTG 10th ANNUAL RTTY CONTEST

GENERAL- There will be a shortwave and VHF contest. Both of them will be scored separately. The contest is split in 5 contests within a year. After the 5th single contest the winner in each classification will be announced.

SHORTWAVE: 1300-1800 UTC Sat. Feb 21
0700-1200 UTC Sun. Apr 12
1200-1700 UTC Sat. Jun 13
0700-1200 UTC Sun. Aug 30
1300-1800 UTC Sat. Oct 18

continued on page 7

PREVENTING RFI TO AND FROM A MICROPROCESSOR

BY: Paul Johnson, KØPJ
3425 Gurnard Court
San Diego, CA 92124.

Transmitters, receivers and microprocessors often do not mix well, due to RFI. The enclosure is a major factor effecting the RFI level, both to and from a microprocessor.

A metal enclosure is the best solution, but due to the size and shape of some microprocessors, the cost is prohibitive. For example, the Heathkit H89 which includes a built-in CRT is quite large.

The next best solution is application of a conductive coating to the inside of your plastic enclosure. There have recently been developed several different conductive coating paints, using a variety of metals, from gold, to nickel as the conductive pigment. A nickel pigment paint is the most economical paint and works quite nicely.

The product I have found is called XECOTE (trademark) and was developed by the Metex Electronics Shielding Group. Due to the nature of this paint, great care must be taken in handling it, and good quality spray paint equipment must be used for application of it. This paint is quick drying and will air cure in approximately 24 hours. One gallon will cover 270 square feet of surface with a coating of .002 to .003 inch thickness.

This thickness will give approximately 60 DB of shielding, with a one ohm per square resistance. It has been applied successfully to a variety of plastics without the use of a primer. (Acrylics, plexiglas, lucite, polycorfornate Etc.).

Using one pint, (cost approximately $35.00) I sprayed a Heathkit H89, H19 and H8. No RFI problems from or to the above equipment has been detected since the coating was applied.

Possible sources of this product are:Metex Corporation, 970 New Durham Road, Edison NJ 08817 Tel:201-287-0800. OR: Cal-Metex, 20437 S. Western Ave., Torrance, CA 90501. Tel:213-320-8910.

XECOTE is a registered trademark of the Metex Corporation.

0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000

FROM THE MAIL BAG-RIGHT OUT OF THE BLUE

It's spring and the rest of the country is awakening from its long winters' nap to find out what Californians have known for months--- that is, when the weather warms up activities gear up (look at all of contests going on). Our violets were perfuming the air back in January and now the fruit trees and roses are in bloom....On the other hand, perhaps there is something to be said for the colder climes- no lawns to be mowed nor gardens to be attended to during the winter. Guess we can't have it both ways. So I'll take California.

The mail has been coming in by the sackful lately and John and I have been trying to keep up with it, as we must have the next issue of the JOURNAL in the mail before leaving for Dayton on the 23rd of April. The RTTY group will be meeting in the same hotel as usual gathering in the Kings room for socializing. I would tell you the name of the hotel except for the fact that it is lost somewhere in the shuffle of paperwork going on in the effort to get the JOURNAL ready for the printer, and the packing cases of our newest gear. The Kenwood TS 130S sits next to me along side of our old 2 meter rig and their supplies. While over my left shoulder is our new Heathkit H89. Itis on a desk with the Hallicrafter rig and not on my shoulder HI!.Instruction books for the Heath, directions for the Cushcraft A-3, A74 and Ringo Ranger and books on antennas are piled on the chairs and floor and in the dining room and patio are the antennas, partially put together. Somewhere amongst all of this good debris is a registration form from the Hamvention giving us the name of the hotel for RTTYers.It is something ----North. Look for us at any rate on Thursday, Friday, Saturday and Sunday. We'll be off to Philadelphia from there to see Johns' relatives and the following week to Chicago to see some of relatives. Along the way we plan to see a few Hams and talk beedle-beedle with them.

Received a letter from Gwen Burnett and another from the ARRL both asking for info about helping someone in Rhode Island with a model 15KSR. Gwen VE3AYL is secretary of CARTG, wrote that there are few Amateurs living close to Rhode Island so perhaps some of our own RTTYers can help out? The daughter is deaf and her mother wrote to the Asbury Park (NJ) Press to obtian aid. John Sheetz called us the other day and I asked him to look into the matter. John, K2AGI attends to such matters in the New Jersey area but could never the less use additional help for problems such as this one. Seems to me that the ARRL should have the information needed for matters pertaining to the TTY and TTD machines already on hand. ARRL are you listening??

OFF SOAPBOX- On this months cover you will note a very nice picture of the rear end of a train and some nice people on it. The people are: Hank Scharfe W6SKC,Luz de la Maria de la Rosa, Art Cohen and 9 year old Bobby Scharfe. Seems that Hank has a new toy (and I thought my new Heath toy was the ultimate in toys). Last year Hank bought the Rock Island's President's Business car (85 feet long and weighing 80 tons).Now Art has bought another business car and the two of them are outfitting them as complete RTTY stations. So someday says Hank there will be a two way RR car to RR car QSO on the green keys. We did hear about Hank and Bill Henry's (Hal Communications) trip to New Orleans from other sources. Seems they left Chicago to take Bill home to Urbana, Illinois in style but after arrivigg in Urbana, Bill jumped off the train, kissed his wife and jumped back on and continued on to New Orleans, and they say John and I are nutty for taking on the JOURNAL......Dee,KA6NYW

HITS & MISSES

George Hammon WA6CQW
14215 Pecan Park Lane SP 73
El Cajon, CA 92021

FROM THE MAILBAG

I purchased, as usual, a new league handbook from Ham Radio. I purchased the 1981 edition for $3.50. I make it a point to stop by the Ham Radio Publishers Group booth at a convention and buy one every year. I just can not imagine someone paying ten dollars for a copy. I paid $3.50, in January at SAROC, wonder what they will be selling for in Dayton? (Publishers note:I'll let you know George since the JOURNAL will be there this year). I really enjoyed Lew McCoy, W1ICP comments on the 1981 ARRL handbook at SAROC. Lew, holding a handbook (1981) stated, "This is a crock" Lew pointed out many problems with the new handbook. Any Amateur who gets the chance to hear Lew McCoy speak should certainly not miss it. The new handbook has an RTTY section (see pages 14-24 to 14-28). One thing that caught my eye was, "periodic publications are available which are devoted exclusively to Amateur RTTY. OH well, it took over twenty years for the league to recognize that there are two Germanys, maybe some day they will recognize that the RTTY JOURNAL exists.

TOPOGRAPHIC MAPS

The United States Geologic Survey has available topographic maps. You can obtain an index to maps of your state by writing to the following: East of the Mississippi River-Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia 22202.

West of the Mississippi River-Branch of Dostribution, U.S. Geological Survey, Box 25286 Federal Center, Denver, Colorado 80225.

PHOTOS

Would you like photos in your newsletters?? The problem with photos is in getting them "screened" that is, broken down into black dots of various intensities for the printing process to work. If your club has such a need contact: Tania Miller, WB9TKC, Eleven N. Richland, Freeburg, Illinois 62243.

ARRL SURVEY

The March QST has a fine article on survey of Amateur Radio 1980. This survey was conducted by the Institute of Social Research of Florida State University on contract to the ARRL. The area of interest to RTTYers is as follows. One of the questions asked in the survey was, "How interested in the following areas of Amateur Radio activity are you?" The answer was interesting. Let's take a look.

Presently plan to:	Active	be active	interest	no int.
Personal computers	11%	15%	26%	48%
Amateur satellites	2%	18%	36%	44%
(RTTY)	(4%)	(11%)	(21%)	(64%)
Digital Data Communications	3%	11%	23%	63%
Microwave experiment	3%	8%	24%	66%
Narrow band Voice Mod.	2%	7%	28%	63%
Slow scan TV	1%	8%	23%	62%
Moonbounce	1%	6%	25%	68%
Fast scan TV	1%	6%	19%	74%

From the above chart you can see that 36% were interested in RTTY. I hope the league takes a long look at this figure and also the personal computers figures. I know the league is aware of the money being spent in these areas.

The code free license has again reared its ugly head. I feel that this is a terrible mistake. The league needs members in a most desperate way. The ARRL dues jumps to $25.00 per year July 1, 1981. I feel there may be a spurt of life members but a big picture will show a drop in overall membership. Incentive licensing was a diaster. The code free license is a provocative temptation to fill up the membership hopper. The same survey revealed to the league an overwhelming support of Morse Code retention. The USA Amateur (61%), and the Canadian Amateur (66%) stated it was absolutely the essential thing to keep. Never-the-less this will be proposed. Will the league never learn to listen to its own members rather than the dictates of some "power" groups???

So long for now..............

George, WA6CWQ

000000000000000000000000000000000000
000000000000000000000000000000000000

SEE YOU IN DAYTON IN THE KINGS ROOM?

WHERE THE RTTYERS GO TO MEET RTTYERS

000000000000000000000000000000000000

000000000000000000000000000000000000
000000000000000000000000000000000000

WITH REGRETS

THE JOURNAL HAS TRIED TO KEEP COSTS DOWN BUT PRINTING, SUPPLIES AND NOW POSTAL RATES HAVE ALL GONE SKY HIGH. IT IS WITH REGRET THAT WE MUST INCREASE OUR PRICES. STARTING MAY 1,1981, THE RTTY JOURNAL WILL COST $7.00 PER YEAR. FOREIGN COSTS HAVE APPRECIATED ALSO $13.50.

DIGITAL ELECTRONIC SYSTEMS, INC.

1633 WISTERIA CT. ENGLEWOOD, FLA. 33533 813-474-9518

The INFO-TECH M-77 COM-CLOCK

A microprocessor based station accessory that will, on command:

1. Send your call in Morse, Baudot, or ASCII.
2. Send date and time in Morse, Baudot, or ASCII.
3. Respond to sel-calls with pre-programmed message.
4. Give continuous readout of date and time on built-in L.E.D. display.
5. Act as a beacon controller sending call, date, time, and pre-programmed message.
6. Act as a programmable clock with several function outputs.
7. Perform a host of other functions using the built-in 16 button keyboard.

Inputs: MIL 188, TTL, EIA, isolated loop, PTT, remote operate

Outputs: MIL 188, EIA, TTL, isolated loop FSK $\overline{\text{FSK}}$ AFSK (2 shifts) grid and cathode keying, + 6 open collector programmable outputs.

Available about February 1, 1981

For more information write:

Digital Electronic Systems
1633 Wisteria Court
Englewood, Fl. 33533

"We Speak Ham Radio"

Dialta Amateur Radio Supply
S. Dick Uhrmacher, KØVKH
212 - 48th Street
Rapid City, South Dakota 57701
605-343-6127

Update your RTTY installation

DEALERS FOR INFO-TECH ELECTRONIC EQUIPMENT

transceivers receivers.
amplifiers. antennas

Video monitors

INFO-TECH M-300C
TRI-MODE KEYBOARD

Call for SPECIAL PRICES

INFO-TECH M-200F
TRI-MODE CONVERTER

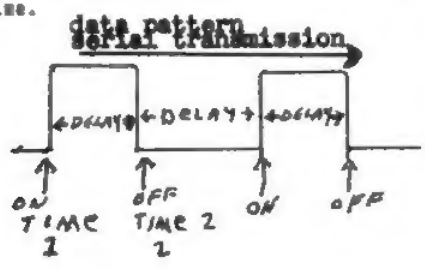
RTTY MICROCOMPUTING
by Clayton Abrams,K6AEP
1758 Comstock Lane
San Jose, CA 95124

Since my last column I have been very busy developing software for my new TRS-80C Color computer. Prior to the TRS-80C all of my computers have been the homebrew variety. It is certainly a different experience with packaged units. So far I have a TRS-80C slow scan television software keyboard completed and will have a RTTY program by publication of this column. I have found one thing in common between the packaged computers and homebrew systems and that is that the interfacing to the outside world is the same.

In my last column, I discussed methods of developing RTTY bit patterns. To review this subject, they can be generated by hardware or software. The hardware approach has simpler software, however, the costs tend to be higher. The software approach is more flexible and very simple to duplicate after the software has been developed.

If you analyze a RTTY signal you will find that it is only a series of two states (on/off) conditions with varying durations. The shortest duration is called a data bit, the longest is a stop bit. Since, I have chosen the software approach to RTTY generation, let's see how this is accomplished.

In the following timing diagram a character pattern is shown. This pattern could be ASCII, Baudot or any commonly used pattern. In all cases let's assume the pattern is transmitted serially, from left to right in time.



As you can see from the diagram, transmission is nothing more than a series of on/off conditions, where up is on and down is off. To accomplish this transmission at time 1 you turn on a bit on a port. This is accomplished by sending the bit to a port by a machine language instruction. This instruction will force an electrical signal to go positive on an IC on the output port. If you delay the correct amount of time, you can turn off the bit by another instruction at time 2. A delay in computer technology is a count down from a number initially loaded in a part of a computer called a register. If you subtract one from this number on each pass through this small portion of the program the register will eventually reach zero. This operation causes a program delay. If you change the number initially loaded in the register the speed of the RTTY can be changed. The number of delays determine if you are transmitting ASCII (8) or Baudot (5). To generate the actual RTTY signal, the output bit on the port is connected to a RTTY modulator ot T.U.

This is the same technique which I have employed in my software. For the TRS-80C Color computer, the output port is the RS-232 connector on the rear of the unit. This signal is attached to a single bit of an 8 bit port (MC 6821 IC). To turn the RS-232 output on all you have to do is load into the computers accumulator a byte with a single bit on. You next store the accumulator to the memory mapped address of the port. The process uses 6 bytes of machine language code and takes about 8 microseconds of time.

As you can see the use of software development for RTTY timings is very attractive. In the case of a computer like the TRS-80C, if the software approach is used, all you have to do is load a program from cassette tape. Connect a TU to the RS-232 output and you are on RTTY. The most attractive thing about this approach is that the complete computer is low cost, and no modifications are required to the computer. In my next column I'll discuss how to receive RTTY with a general computer.This is the reverse of transmission.

OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

CONTEST RULES CONTINUED G.A.R.T.G.

VHF: 0800-1300 UTC Sun. Feb 22
1200-1700 UTC Sat. Apr 11
0700-1200 UTC Sun. Jun 14
1200-1700 UTC Sat. Aug 29
0800-1300 UTC Sun. Oct 18

BANDS- 80 and 40 m VHF; 2m & 70 cm

CONTEST CALL- CQ GARTG CONTEST. After each QSO the station having called last keeps the QRG. The previous holder should make QSY.

EXCHANGE-Shortwave: RST. QSO number, name, QTH. VHF; Same as shortwave & in addition QTH-locator.

SCORING-Each station may be worked once per band. Each complete QSO counts 1 point on 80 and 40 meters. VHF:Each complete QSO on 2 meters and 70 centimeters counts one point per kilometer worked. Contacts via repeaters are NOT VALID! Final score: total of QSO points.

CLASSIFICATIONS-

Class A: Shortwave stations with more 200 watts input.

Class B: Shortwave stations with up to 200 watts input.

Class C: SWL stations

Class D: VHF staions.

LOGS TO CONTAIN- a) Call, name, QTH, (complete address) b) Classification c) Time in UTC, Call, name, QTH, station worked, transmitted and received message numbers, band used. d)Final score (logs without final score will count as check logs). VHF:a) to d) same as shortwave. e) QTH-locator sent and received. SWL: For points and scoring confirm above. The same station may be reported only 2 times. Instead of message received the SWL should report of partnerstation (worked).

RESULTS- The results will be published in GARTG newsbulletin RTTY-NEWS and in club magazine RTTY subscription is 40 Deutsch Marks per year.

DEADLINE- Logs to be received not later than 20 days after closing of each single contest.

MANAGER- Wolfgang Punjer,DL8VX, POB 90 11 30, D-2100 Hamburg, Germany.

OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

MORE CONTEST RULES AND RESULTS ELSE WHERE IN THE JOURNAL.

VHF NEWS

BY: John R. Cunningham, WA9WJG.....Rural Route 2, Box 91....Covington, Indiana 47932.....

First things first, I am very happy to have the opportunity to write this column for the JOURNAL.

Let's get acquainted, name and QTH are above, age is 40. The location here is one mile east of the Illinois and Indiana State line, three miles north of Interstate 74. I can see Danville, Illinois, six miles away, out of the window.

I have been licensed since 1967, currently holding an Advanced Class. I do work HF RTTY also, when I cannot find anyone on VHF.

There are three RTTY repeaters in this area. The first one, the Urbana, Illinois repeater, is RTTY only. This repeater is on 147.60/.00. Though it is down for repairs at the moment. I heard from AL WB9OIH, that it should be going again in the near future. Bill K9GWT, has his HAL DS 3100 ASR on this machine. He has the MSO storage option on it. If you have not worked one of these yet, why not get on and check it out ?? You are missing a lot of fun.

The second machine in this area is the Gridley, Illinois repeater, which is RTTY and fone. This fine machine covers a lot of area in the middle of Illinois and the western part of Indiana, and does it consistently. This repeater can hear my 10 watt, 8 element station, nearly 100 miles away most any time.

The third repeater in this area is the Indianapolis, Indiana repeater 146.28/.88 RTTY/fone. This repeater is not very high, it is located on one of RCA's buildings, but even so it reaches out 75 miles to here quite often. This repeater is operated by the RCA Radio Club and has some really neat features which I will be telling you about in a future column.

I would like to have some details on some of the repeaters out there. I will compile this information and then make it available to anyone wanting it to put together an RTTY repeater. What kind of equipment are you using in your repeater? How are you setting up the RTTY/fone system? How about your auto start or auto response system, how is it set up? What is your local bunch doing on 6 or 2, how about 220? Do you use AM or FM, AFSK or FSK, mechanical clunker, spagetti factory style or latest state of the art????

Send me what you can about these systems, any and all info appreciated.

Got a question about RTTY? I may not know the answer (understatement) but I will bet I can help you find it. Send you questions in, someone else is probably wondering about the same thing. If you send an SASE I will answer direct.

With a little input from a lot of people I hope to make this an interesting column. If you see me at a Hamfest by all means say HI. If you hear me on the air you will not be forgiven if you don't call me...Hi Hi. If you see or hear me anywhere let's talk RTTY, VHF in particular. I want to hear about your VHF RTTY DX too, anyone ever get a WAS VHF RTTY?

Do you know that some people think that 2 meters will not work over 100 miles away?? Illustration, one Sunday evening last November I received a phone call from a fellow in Iowa. He said, "Was that really you I was working on 2 meters RTTY?" When I confirmed it he told me that he thought it might have been one of the locals having some fun with him on the air.

The point I wish to stress here is, that if you are not on VHF RTTY, why not??, you are sure missing out on a lot of fun.

After the previous administration, I hesitate to say this, but listen for my "peanut whistle", I'll be looking for you on VHF RTTY.

73 John.....

MORE CONTEST RULES

14th EUROPEAN DX-CONTEST WAEDC 1981

WHEN- 00.00 UTC Saturday, November 14th until 24.00 UTC Sunday, the 15th Single OP stations should not exceed 36 hours of operation. Take no more than 3 breaks for the off period please.

BANDS- Amateur bands 3.5 thru 28 MHZ.

CLASSES- Single OP-All bands, Multi-OP-Single TX, SWL-printer.

MESSAGE- RST/QSO-number.

POINTS- One point for each QSO, a station may be worked once per band, each confirmed QTC- sent or received-counts one point also.

MULTIPLIERS- Will be counted according to the EUROPEAN and ARRL Countries list, in addition each JA, PY VE/VO, VK,W/K. ZL, ZS, UA9-0 call area. Contacts on 3.5 MHz may be multiplied by four, on 7 MHz by three and on 14/21/28 by two. (See also note: Special regulations for RTTY).

SCORING- Final score is total QSO-plus QTC points multiplied by the sum of all band-multipliers.

QTC-TRAFFIC- A QTC contains time, call and QSO number of the station being reported, i.e. 1300/K7BV/134. A QTC should be reported only once and not to the originating station. A maximum of 10 QTC to the same station (all bands) is allowed only.Keep a list of QTC sent with series numbers i.e. QTC 3/8 indicates 3rd series containing 8 QTC.

LOGS- It is suggested to use the official DARC log sheets. Send SASE for your copies.

NOTE- Special regulations for RTTY (rearrangement)- In the RTTY section of WAEDC, contacts between all continents and also one's own continent are permitted. Contacts within the same continent count a multiplier of ONE per band, including 80 and 40 meters. QSO as well as QTC-traffic with one's own country (call area)

continued on PAGE 11

UNSURPASSED RTTY

No other RTTY terminal made gives you ALL the features of our new DS3100 ASR:

- TX/RX operation with 3 codes: Baudot RTTY, Morse Code, ASCII RTTY
- Storage buffers for 150 lines of RX storage and 50 lines of TX storage
- The HAL "original" split screen shows both RX and TX buffers or whole screen for RX
- Ten programmable "Here Is" messages can be chained from one to next
- The EAROM allows power-off storage of 2 "Here Is" messages and terminal operating conditions
- Programmable WRU answer-back and selective-call features
- Separate CW identification key for RTTY operations
- Automatic TX/RX control with KOS plus 4 keyboard controlled accessory switches
- Internal real time clock keeps 24 hour time plus date
- Newly developed CW receive circuitry and programs give superior CW reception
- New green, P31 phosphor display screen gives clear, eye-easing viewing
- On-screen status indicators give continuous display of terminal operating conditions
- Word-Wrap-Around prevents splitting of words at end of display line
- Continuous, line, and word modes offer flexibility in editing transmit text
- Attractive streamlined metal cabinet gives effective RFI shielding from transmitters

Here Are More DS3100 ASR Specifications that Give You State-of-the-Art RTTY Operation:

QBF and RY test messages ■ Loop and RS 232 RTTY I/O ■ Plus or minus CW key output ■ 25 pin EIA modem connector ■ Half or full duplex ■ Upper-lower case ASCII ■ All ASCII control codes ■ Optional line printer for all codes ■ Selectable ASCII parity ■ 110 to 9600 baud ASCII ■ 45 to 100 baud Baudot ■ 1 to 175 WPM Morse receive and transmit ■ UnShift on space for Baudot ■ SYNC idle for RTTY and Morse ■ Break key for RTTY ■ Tune key for Morse ■ Automatic CR-LF ■ 120/240 v, 50/60 Hz power ■ Custom labeled key tops show control operation ■ Copy receive text into transmit buffer ■ TX flags allow segmenting of TX buffer ■ One year warranty ■ Price $1995.00

HAL COMMUNICATIONS CORP.
Box 365
Urbana, Illinois 61801
217-367-7373

For our European customers, contact: Richter & Co. D3000 Hannover 1 • I.E.C. Interelco, 6816 Bissone/Lugano • Radio Shack Ltd., London NW6 3AY • Erik Torpdahl Telecom, DK 3660 Stenlose Denmark

CLASSIFIED ADS

30 WORDS $3.00, ADDITIONAL WORDS 5¢ EACH CASH WITH COPY--DEADLINE 1st of month for following month.

TELETYPE, KLEINSCHMIDT, REPAIR PARTS wanted, unused. (M 14 thru 40). Possibly can pick up at your QTH. Cash or trade for any quantity. Write Typetronics, Box 8873, Ft.Lauderdale, FL 33310 or phone 305-583-1340 after 10 PM EST. Send SASE for list of parts, gears, ribbons, supplies, toroids, Fred Schmidt N4TT ex-W4NYF.

FOR SALE: 6th edition of the "LIST OF RTTY STATIONS IN FREQUENCY ORDER", now contains 1717 frequencies monitored in 1980-81 of commercial stations like press, aeronautical, weather, telex, military, diplo, maritime etc, on shortwave. Schedules of 82 news agency stations on 641 frequencies and 178 special abbreviations are also included. This offset printed list is airmailed to you for $17.00 (check or cash) from Joerg Klingenfus, Panoramstrasse 81, D-7400 Tuebingen 7, West Germany.

THOUSANDS OF COMMERCIAL RTTY STATIONS are active between the Amateur shortwave bands. Many of them can easily be printed with your existing equipment. (Take care of legislative restrictions if applicable!) If interested, you need "software", compiled from nonstop monitoring the complete shortwave spectrum. I have up-to-date frequency, callsign, schedule, code lists on press, military, diplo, telex, aeronautical, weather etc. stations. Write for details. Joerg Klingenfuss, Panoramstrasse 81, D-7400 Tuebingen 7, West Germany.

FOR SALE: "LIST OF NEW RADIO REGULATIONS DECIDED AT WARC 1979", containing the original texts of those new Radio Regulations (RRs) which are of essential interest to Radio Amateurs. They cover: terms and definitions; designation of emissions (completely revised!); frequencies, callsigns; broadcasting service; Amateur service. The chapter dealing with frequencies contains the new Table of Frequency Allocations from 9 kHz to 150 MHz including all footnotes. Most of these new RRs will come into force on 1 January 1982. The list is compiled from official ITU documents and includes also the agenda and the final acts of the Conference. This offset printed and hardbound book is airmailed to you for $16.00 (check or cash) from Joerg Klingenfuss, Panoramstrasse 81, D-7400 Tuebingen 7, West Germany.

KITS AND PARTS FOR THE RTTY AMATEUR, featuring the famous MEG-1 Demodulator, ID-1 CW IDer, and IPT-1 Interface, Power Supply, and Timer. These units available as kits, or fully assembled, plus a wide selection of quality new components, make the Midnight Engineering Group well worth checking out. And don't forget our carbide drill bits, now more sizes available. Send 15¢ stamp for catalog Midnight Engineering Group, POB 349, Galesburg, IL 61401.

NEW SUPER-LOG II machine language program for TRS-80 Model I & Model III Computers. Whether you're a ragchewer, contester, DXer or Award Hunter, SUPER-LOG II will overwhelm you with "Lightning Search & Sort" capability--the ultimate in computerized logkeeping! Instant recall of typical logbook information at your fingertips! Cassette based Regularly $19.95, INTRODUCTORY OFFER $16.95 plus FREE Contest Program, Super Duper II. Complete Disk Version Add $8.00 MICRO-80 INCORPORATED, R-2665 Busby Road, Oak Harbor, WA 98277.

NEWS-NEWS-NEWS-Amateur Radio's Newspaper "WORLDRADIO". Trial subscription Two issues for One Dollar. "WORLDRADIO" 2509-F Donner Way, Sacramento, CA 95818.

WORLD PRESS RADIOTELETYPE STATION lists. Over 50 different worldwide press services contained in 3 lists. By time, by frequencies and ITU combination list. All transmitting in English. 24 hours. Hundreds of confidential and fascinating RTTY news stations in these up to date lists. Utilize your present equipment. Book with up to date lists $5.00 PPD. Universal Electronics, 1280 Aida Dr, Reynoldsburg, OH 43068.

TELETYPE PARTS WANTED. Any quantity, any models, highest prices paid. 201-464-5310 Van W2DLT Box 217, Berkeley Heights, NJ 07922.

TOROIDS WANTED FOR EXPORT, any quantity, 88mhy. load coils. 201-464-5310 Van W2DLT, Box 217, Berkeley Hts NJ 07922.

GOVERNED MOTORS, Teletype LMU 39/LMU 41 wanted. Also teletype ESU for ASR/KSR 28 Lo-Level/RFI (Gold box located in kneewell of unit, or will buy/swap whole units) 201-464-5310 Van W2DLT, Box 217, Berkeley Hts, NJ 07922.

TELETYPE 43 KSR/EIA at cost $848 new. Also M33 ASR good condition $325. 201-464-5310 Van W2DLT, Box 217, Berkeley Hts, NJ 07922.

TELETYPE MACHINES, All makes & models and allied items 25% off on everything. SASE for list. Goodman 5454 S. Shore Dr, Chicago, IL 60615. 312-753-8342.

SALE*SALE*SALE*SALE*SALE: Heavily inked UPI ribbons, fits all teletype machines $6.50 dozen; Dual spool red & black ribbons $14.50 dozen; Perforator tape 11/16" x 8" case of 40 rolls $19.50; 1" x 8" case of 28 roll $19.25; Black 1" x 8" box of 7 rolls $7.50; strip printer tape 3/8" wide, ungummed, box of 25 rolls $14; Model 28 self contained, stand-alone typing reperf with 3 speed gear shift $120. Single speed $95; Model 28 TD $99; Roll paper, Canary or White, 5" diameter, case of 12 rolls $25; Model 28 ASR complete but not rewired or checked $255; Model 28 ASR complete & checked, rewired for local loop $300; Model 28 typing units, sprocket feed, less type box $99; Model 28 typing units, Sprocket feed, less type box $149; Model 28 ASR Auxillary reperf type LARP complete with motor, base & mounting studs to fit inside model 28 ASR cabinet behind TD $99. All prices are FOB Brooklyn, NY. ATLANTIC SURPLUS SALES, 3730 Nautilus Ave, Brooklyn, NY 11224. 212-372-0349.

SATELLITE LOCATOR: Find SATCOM-1, GOES-1, others. Computer generated, typically gives direction and elevation to 157 geostationary satellite positions visible from your unique location (horizon to horizon, one degree increments). Send $10 and your latitude, longitude in degrees, minutes to PPI, Box 74-RJ, Mobile, AL 36601.

CLASSIFIED ADS CONTINUED

TRADE-TEKTRONIX MODEL 531-A scope with CA plug-in, good condition for model 28 ASR. John Wood WB2VTD, ■ White Birch Ct.,Schenectady,NY 12306.

HAM RADIO MAGAZINE. The no-nonsense state of the art Technical magazine. Dozens of exciting projects and an emphasis on quality unmatched by any other radio magazine. Suscribe now and see for yourself. 1 year..$15.00, 2 years $26.00, 3 years $35.00 after June 1,1981 they will be $16.50,28.50 and 38.50 respectively.Ham Radio Magazine, Greenville, NH 03043.

I HAVE:FOR SALE: 2 LPR reperfs as is, no motors $50 each, 2 keyboards $30 each, 4 LAAC cabinets $30 each and 1 28 ASR as is $250. Cash or certified check, you pick up. Willie C. Bean WB4CDE, 1308 Cardinal Ave, Nashville, TN 37216. 615-227-1912.

TELETYPES M28ASR's $250. M33ASR's with RS232 $400. All good to excellent. PICK UP PRICES. Delivery possible within 50 miles for slight charge. Evening-weekend 415-846-3095.

TELETYPE 28ASR WITH TYPING PERF-in excellent condition, including extra gear sets for 75 and 100 WPM, $350. HAL RVD 1005 video unit $175 with almost new Panasonic 12" monitor $110. All equipment hooked up and working. Hank Canvel, W6IWA 805-966 9213, POB 2669, Santa Barbara, CA 93120.

000000000000000000000000000000000000
000000000000000000000000000000000000

WAEDC CONTEST RULES CONTINUED

is NOT allowed. SWLs apply to rules accordingly.

AWARDS- Certificates for the highest scorers in each class and each country, continental leaders will receive the WAEDC plaque.

DEADLINE December 15th, 1981.

MANAGER- Klaus K. Zielski, DF7FB, P.O Box 1147, D-6455, Erlensee, West Germany.

000000000000000000000000000000000000
000000000000000000000000000000000000

ALEXANDER VOLTA CONTEST

EXCHANGE POINTS TABLE

YOUR zone \ CORRESPONDENT zone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	14	10	13	16	18	22	20	25	30	36	37	39	21	22	19	20	17	11	25	29	29	22	22	16	28	25	31	39	35	14	36	25	29	34	39	40	47	44	15
2	14	2	15	8	7	16	16	12	16	23	24	30	30	12	14	16	19	20	19	19	25	31	26	30	28	35	35	40	50	50	25	47	14	21	21	25	33	30	3	6
3	10	5	2	8	11	9	13	14	18	21	28	28	30	26	28	27	29	27	21	32	37	39	32	31	24	37	33	40	43	35	11	32	29	35	35	42	48	50	52	20
4	13	8	8	2	3	8	10	8	12	18	22	25	27	19	21	23	26	26	22	26	33	37	32	34	30	40	38	44	52	44	20	40	21	28	26	33	40	41	44	14
5	15	7	11	3	2	9	9	6	10	17	20	24	25	18	20	22	26	26	24	35	32	38	33	35	31	41	40	45	54	46	22	41	19	27	24	31	35	39	42	13
6	18	16	9	8	9	2	4	7	10	12	19	19	21	27	29	31	34	33	29	34	40	46	40	40	33	46	42	49	47	38	17	32	28	36	30	37	44	43	48	22
7	22	16	13	10	9	4	2	4	6	8	15	15	17	26	29	31	35	36	33	33	40	[illegible]	42	44	38	50	46	53	49	40	22	34	26	34	26	33	40	36	44	22
8	20	12	14	8	6	7	4	2	5	11	15	18	19	22	24	27	31	32	30	29	35	42	38	42	37	47	46	51	54	44	24	38	21	30	23	30	38	36	41	[illegible]
9	25	16	18	12	10	10	6	5	2	8	10	14	15	23	25	29	33	35	34	29	35	43	41	45	41	50	50	55	52	45	28	38	21	30	23	27	35	32	33	21
10	30	23	21	18	17	12	8	11	8	2	9	7	9	31	33	37	41	43	41	36	42	51	49	52	45	58	52	54	44	37	28	31	28	36	24	29	38	31	35	29
11	36	24	28	22	20	19	15	15	10	9	2	9	7	26	28	33	36	41	43	30	34	42	45	51	52	49	55	49	42	41	37	35	22	29	16	20	28	23	[illegible]	27
12	37	30	28	25	24	19	15	18	14	7	9	2	3	35	37	41	45	49	48	39	42	49	53	58	50	52	52	48	37	33	32	27	31	37	34	27	33	27	33	34
13	39	30	30	27	25	21	17	19	15	9	7	3	2	33	35	40	43	48	49	37	39	46	50	56	53	50	52	46	34	34	35	29	29	34	21	24	30	24	30	34
14	21	12	26	19	18	27	26	22	23	31	26	35	33	2	3	6	10	14	18	7	14	21	19	25	27	27	30	32	42	49	34	55	5	10	15	19	21	26	26	6
15	22	14	28	21	20	29	29	24	25	33	28	37	35	3	2	5	9	13	18	6	11	18	17	23	27	25	29	30	39	47	36	54	6	7	15	18	19	25	24	8
16	19	16	17	23	22	31	31	27	29	37	33	41	40	6	5	2	4	8	13	6	10	15	12	18	22	21	24	26	36	42	33	49	10	9	20	21	21	2	[illegible]	9
17	20	19	29	26	26	34	35	31	33	41	36	45	43	10	9	4	2	5	12	7	8	12	8	14	19	17	20	22	32	38	32	45	14	10	22	22	20	27	23	12
18	17	20	27	26	26	33	36	32	35	43	41	49	48	14	13	8	5	2	7	12	12	12	6	11	14	15	16	20	30	35	29	40	13	15	27	28	24	31	27	14
19	11	19	21	22	24	29	33	30	34	41	43	48	49	18	18	13	12	7	2	18	19	16	10	10	9	16	15	20	30	32	21	36	23	21	31	34	40	38	33	16
20	25	19	32	26	35	34	33	29	29	26	30	39	37	7	6	6	7	12	18	2	6	14	14	20	26	21	26	25	34	43	39	49	8	3	15	16	15	22	20	12
21	29	25	37	33	32	40	40	35	35	42	34	42	39	14	11	10	8	12	19	6	2	9	11	17	24	16	21	20	28	37	40	43	14	6	18	16	11	19	15	19
22	29	31	39	37	38	47	46	42	43	51	42	49	46	21	18	15	12	12	16	14	9	2	6	10	18	17	13	11	21	29	36	35	22	14	26	22	15	22	16	24
23	22	26	32	32	33	40	42	38	41	49	45	53	50	19	17	12	8	6	10	14	11	6	2	6	13	8	12	14	24	30	31	37	22	16	25	26	21	28	22	20
24	22	30	31	34	35	40	44	42	45	52	51	58	56	25	23	18	14	11	10	20	17	10	6	2	8	6	6	10	20	24	26	30	28	22	35	33	25	32	25	25
25	16	28	24	30	31	33	38	37	41	45	52	50	53	27	27	22	19	14	9	26	24	18	13	8	2	13	9	15	23	30	18	27	32	28	41	40	33	40	33	25
26	9	35	37	40	41	46	50	47	50	50	49	52	50	27	25	21	17	15	16	21	16	7	8	6	13	2	6	5	16	22	31	29	29	21	33	29	21	21	20	29
27	25	35	33	38	40	42	46	46	50	52	55	52	52	30	29	24	20	16	15	26	21	13	12	6	9	6	2	7	15	18	25	25	34	[illegible]	40	35	27	32	26	30
28	31	40	40	44	45	49	53	51	55	54	49	48	46	32	30	26	22	20	20	25	20	11	14	10	15	5	7	2	10	17	31	24	34	25	36	30	22	25	19	34
29	39	[illegible]	43	52	54	47	49	54	52	44	42	37	37	42	39	36	32	30	30	34	28	21	24	20	23	16	15	10	2	9	15	32	42	33	39	31	24	24	20	44
30	35	50	35	44	46	38	40	44	45	37	41	33	34	49	47	42	38	45	32	43	37	29	30	24	30	22	18	17	9	2	24	7	51	42	47	40	34	32	24	48
31	14	[illegible]	11	20	22	17	22	24	28	28	37	32	35	34	36	33	32	29	21	39	40	36	31	26	19	31	25	31	15	24	2	22	33	42	46	53	[illegible]	[illegible]	[illegible]	28
32	36	47	32	40	41	32	34	38	38	31	35	27	29	55	54	49	45	40	36	49	43	35	37	30	27	29	25	24	32	7	22	2	57	48	47	42	38	34	[illegible]	50
33	25	14	29	21	19	28	26	21	21	28	22	31	29	5	5	10	14	18	23	8	14	22	22	28	32	29	34	34	42	51	35	57	2	9	10	14	18	22	23	10
34	29	21	35	28	27	36	34	30	30	38	29	37	34	10	7	9	10	15	21	3	6	14	16	22	28	21	27	25	33	42	42	48	9	2	[illegible]	[illegible]	12	18	16	16
35	34	21	35	26	24	30	26	23	20	24	16	34	21	15	15	20	22	27	33	15	19	26	29	35	41	33	40	36	39	47	46	47	10	13	2	[illegible]	15	15	19	20
36	39	28	42	33	31	37	33	30	27	29	20	27	24	19	18	21	22	28	34	16	16	22	26	33	40	29	35	30	31	40	53	42	14	12	[illegible]	2	8	8	11	24
37	40	33	48	40	38	44	40	38	35	38	28	33	30	21	19	21	20	24	30	15	11	15	21	25	33	21	27	22	24	33	52	38	18	12	15	8	2	7	5	28
38	47	36	50	41	39	43	38	36	32	31	23	27	24	26	25	27	27	31	38	22	19	22	28	32	40	27	32	26	24	32	56	34	22	18	15	8	7	2	6	32
39	44	37	52	44	42	48	44	41	38	38	29	33	30	25	24	25	23	27	33	20	15	16	22	25	33	20	26	19	20	29	51	33	23	16	19	11	5	6	2	32
40	15	6	20	14	13	22	22	18	21	29	27	34	34	6	8	9	12	14	16	12	19	24	20	25	25	29	30	34	44	48	28	50	10	16	20	24	28	32	32	2

RESULTS OF THE 13TH EUROPEAN DX-CONTEST WAEDC 1980 RTTY

Single Operator

	Call	Score	QSO	QTC	Multi
1.	I5FZI	126700	223	501	175
2.	3B8RS	98770	229	352	170
3.	SM6ASD	87150	191	390	150
4.	OZ1CRL	67080	167	349	130
5.	I1TXD	57342	195	308	114
6.	UV3FD	37145	156	235	95
7.	KØBJ	35306	85	193	127
8.	4Z4KB	31096	133	205	92
9.	Y39XO	21014	95	171	79
10.	YU2OH	20504	145	88	88
11.	Y33TA	17898	96	218	57
12.	DF5CI	12921	60	117	73
13.	OE2SNL	11696	67	105	68
14.	OK2BJT	10918	78	128	53
15.	DL8QP	10560	54	138	55
16.	EA3AZX	9945	66	129	51
17.	EA3BLQ	9504	50	126	54
18.	DF6AI	8268	58	101	52
19.	DF6ZY	7473	59	82	53
20.	VK3KF	7360	52	40	80
21.	DL1VR	6370	48	82	49
22.	DJ9IR	6118	44	89	46
23.	W3KV	5916	50	52	58
24.	DJ9MH	4944	37	66	48
25.	DJ1XT	4160	35	69	40
26.	DJ2YE	3465	55	0	63
27.	G3HJC	3280	36	44	41
28.	DK1RV	3161	45	64	29
29.	YO3AC	3030	25	76	30
30.	WA6WGL	2920	36	37	40
31.	YU7NWJ	2325	49	26	31
32.	G4HYD	2080	26	39	32
33.	DL1OY	1242	16	38	23
34.	I5YNQ	1225	35	0	35
35.	DF7FB	1118	23	20	26
36.	SL3ZR	720	24	06	24
37.	SM6CAL	682	31	0	22
38.	OZ9GA	675	25	0	27
39.	DK4IS	506	22	0	23
40.	Y59ZF	300	10	20	10
41.	JA7ML	192	12	0	16
42.	DJ1QQ	152	13	06	08
43.	Y33UO	56	08	0	07
44.	DL1AM	48	08	0	06
45.	DL2ZA	28	03	11	02

Checklog: DJ4JI, LA4NL, LA6OU, Y71SL, YU2CB, SL5AR, SM5EIT, W. Ludwig

Contestmanager: DF7FB
Auswertung: Kurt Wüstner

TROPHY WINNERS

Single Operator

I5FZI	Europe
3B8RS	Africa
KØBJ	N. America
4Z4KB	Asia
VK3KF	Oceania

Multi Operator

LZ1KDP	Europe
JA3ZRT	Asia

S W L

Friedhelm Reichel	Europe

Multi Operator

	Call	Score	QSO	QTC	Multi
1.	LZ1KDP	138573	247	554	173
2.	YU2CDS	125580	281	409	182
3.	Y31ZB	71808	199	362	128
4.	UK3DBG	64022	197	341	119
5.	G3UUP	63196	233	194	148
6.	DKØOW	53966	160	286	121
7.	UK2BAB	52728	183	324	104
8.	UK3ACR	24396	91	123	114
9.	JA3ZRT	22275	102	173	81
10.	OH1AR	04	02	0	02

S W L

	Name	Score	QSO
1.	J. Dedic	70744	211
2.	H. Ballenberger	44530	163
3.	F. Reichel	30130	118
4.	S. Kahr	27528	222
5.	V. Cesak	22161	95
6.	T. Double	16950	150
7.	A. Schneider	4750	38
8.	J. Bozek	3320	166
9.	K. Wüstner	2320	46
10.	C. Weise	288	18
11.	D. de Puyt	136	07
12.	E. Rauch	54	09

DEUTSCHER AMATEUR-RADIO-CLUB E.V.

Mitglied der IARU

REFERAT BILD- UND SCHRIFTÜBERTRAGUNG

RESULTS 3RD DARC +CORONA+ 10 M RTTY CONTEST DATED SEPT. 27TH 1980

CALL	SCORE	QSO	COUNTRIES	PREFIX
CLASS A:				
1. N8ES	2340	45	15	37
2. DL5GAS	1739	37	16	31
3. WB2UEF	1548	36	13	30
4. OZ1CRL	1209	31	13	26
5. DF6ZV/A	1120	28	12	28
6. WA6WGL	962	26	12	25
7. AD0V	945	27	11	24
8. G3HJC	851	23	15	22
8. I5CBF	851	23	15	22
10. SL5AR	828	23	14	22
11. EA3BQQ	608	19	14	18
12. I0WBX	580	20	11	18
13. OK3KII	400	16	09	16
14. OK1WEQ	375	15	10	15
15. DL4GJ	364	14	12	14
16. G4HYD	325	13	12	13
17. EA3BLQ	322	14	10	13
18. DF8FD	231	11	10	11
19. W5TZB	084	09	03	09
20. DF6ZY	063	07	03	06
21. LA2IJ	050	05	05	05
22. LA7QM	025	05	02	03
23. Y32ZF	018	03	03	03
24. Y53UA	002	01	01	01
CLASS B:				
1. H. BALLENBERGER	972	27	13	23
2. WERNER LUDWIG	580	20	10	19
3. OK1-20677	252	12	09	12
4. Y2-7111/A	144	09	07	09

WE THANK YOU ALL FOR THE BIG PARTICIPATION AND ACTIVITY ON THE BAND. TEN METER WAS GREAT AGAIN. WE LOOK FORWARD TO SEE YOU AGAIN AT THIS YEARS FINAL TEST WHICH TAKES PLACE ON NOVEMBER 15TH, JUST ONE WEEK AFTER THE WAEDC-RTTY TEST, IN WHICH WE HOPE YOU WILL JOIN IN ALSO. THE PLAQUES WILL BE MAILED SEPARATELY AS USUAL.

73, GOOD LUCK AGAIN, WILL MEET YOU ON THE BANDS, KLAUS DF7FB, MANAGER

DF7FB

THE CANADIAN AMATEUR RADIO TELETYPE GROUP (VE3RTT)

20th Annual W/W RTTY DX 'New Decade' Sweepstakes.

October 18-20th, 1980.

Scores for Single Operators

1.	*U3FV	3,796,198
2.	*I5FZI	2,712,360
3.	*K7DV	2,652,680
4.	*I7FKO	2,218,100
5.	*W4CQI	1,837,140
6.	*JA6GIJ	1,546,968
7.	VK2SG	1,264,900
8.	*SM6ASD	1,252,702
9.	*G3HJC	1,281,624
10.	*DL1VB/EA4XW	1,168,896
11.	"VE2JR	1,129,576
12.	*DL5GAS	1,082,920
13.	*HB9LP	1,014,040
14.	*U3KV	998,404
15.	*W6JOX	866,134
16.	*VE7YB	845,520
17.	ON5UG	660,140
18.	VE2AXO	621,888
19.	UA6UGL	574,400
20.	VE4DF	522,265
21.	I8JRA	501,000
22.	UA2OQO	455,304
23.	VK1GM	390,920
24.	GW3EHN	388,035
25.	*OR4PL	314,024
26.	OR7AZ	283,352
27.	U7HI	267,616
28.	*VE7DTA	263,488
29.	VO1EE	241,360
30.	*DF3NA	220,892
31.	VE8CM	220,728
32.	9M2CR	215,870
33.	KØPJ/6	188,150
34.	K4VDM	187,000
35.	VE7DOC	171,428
36.	VE7DLX	132,344
37.	KØBJ	117,570
38.	VK3KF	105,000
39.	VE6GL	85,950
40.	VK2EG	65,040
41.	JR2TZL	60,252
42.	VK5WZ	56,472
43.	WØLHS	37,283
44.	OT7EP	31,680
45.	VE4UA	29,986
46.	LA2IJ	22,408
47.	VE5RG	17,480
48.	G3RDG	16,680
49.	W2KHQ	10,048
50.	VE4WZ	9,720
51.	VE3BPM	7,680
52.	SM5AAY	2,700
53.	W8TCO	200

Multi-Operator

1.	*LZ1KDP	1,677,264
2.	HA6KVD	376,540
3.	OR7OZ	29,046

S.W.L. Printer

1.	*OK1-11857	1,429,120
2.	Horst Ballenberger	1,308,990
3.	G8CDW	379,895
4.	DE-010/1669613	29,046
5.	Kurt Wistner	21,872
6.	DK4IS	1,809

Check Logs: ISØESS, SM6AEN, OZ1DAF, UA9PP,

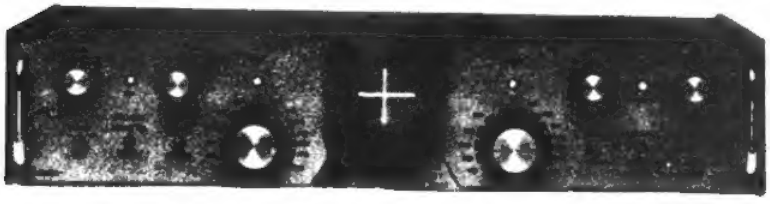
DOVETRON

MPC-1000C

Multipath Correction
In-Band Diversity &
AFSK Tone Keyer

Amateur Net:

Standard features include CONTINUOUSLY tuneable Mark and Space channels (1000 Hz to 3200 Hz), Dual Mode (MARK or FSK) Autostart and internal high level neutral loop keyer (20 to 60 ml). Both EIA and MIL FSK outputs are provided for direct interface to microprocessor and video terminal peripherals.



MPC-1000CR

Signal Regeneration &
Speed Conversion

Amateur Net: $645.00

A front panel switch permits internal TSR-200 Signal Regenerator-Speed converter assembly to electronically "gear-shift" between 60, 67, 75 and 100 WPM. All incoming and outgoing signals are regenerated to less than 0.5% bias distortion. Also available with DIGITAL Autostart (TSR-200D): Amateur Net:

MPC-1000R/-TSR-500

Dual UART Regeneration,
Speed Conversion, 200
Char. Memory, Word Correction & DIGITAL
Autostart

Amateur Net:

The MPC-1000R/TSR-500 provides Preloading and Recirculation of the 200 character FIFO Memory, a keyboard-controlled Word Correction circuit, Variable Character Rate, Tee Dee Inhibit, Blank/LTRS Diddle, a Triple Tone-Pair AFSK Tone Keyer and a Character Recognition/Speed Determination DIGITAL (DAS-100) Autostart mode.

*The MPC-1000R is also available without a TSR assembly and functions as a MPC-1000C with a Triple Tone-Pair AFSK Tone Keyer. This "Basic-R" permits future expansion with a TSR-100, TSR-200, TSR-200D or TSR-500 by simply lifting the lid and plugging in the appropriate TSR assembly: Amateur Net (Basic-R):

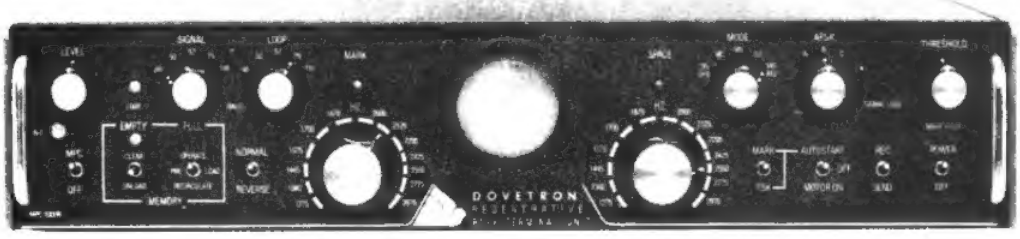
Your QSL will bring complete specifications, or call: 213-682-3705.

DOVETRON

627 FREMONT AVENUE
(P. O. BOX 267)
SOUTH PASADENA, CA. 91030

MPC-1000R BY DOVETRON

MULTIPATH CORRECTION, IN-BAND DIVERSITY, SIGNAL REGENERATION, UP-DOWN SPEED CONVERSION, 200 CHARACTER FIFO MEMORY, KEYBOARD-CONTROLLED WORD CORRECTION & DIGITAL AUTOSTART



THE MPC-1000R REGENERATIVE RTTY TERMINAL UNIT

The DOVETRON MPC-1000R is a complete Transmit-Receive modem designed for optimum radio teleprinter communications on land, sea and in the air.

Standard features include a high level loop supply and keyer (neutral or polar), EIA and MIL FSK outputs, a phase-continuous AFSK Tone Keyer with three selectable Mark - Space - Shift tone pairs, Mark, FSK & Digital Autostart, Automatic Markhold, an internal RY Generator for terminal unit Self-Test and circuit adjustment, and a Signal Loss Alarm circuit.

The MPC Series is available in six different models to meet your exact requirements.

Complete specifications are available on your request, or call 213-682-3705.

DOVETRON

627 Fremont Avenue
South Pasadena,
California 91030, U.S.A.

RTTY Journal

SECOND CLASS PERMIT PAID
AT ENCINITAS, CA 92024

PO BOX RY

Cardiff by the Sea, CA. 92007